SMALL
BUSINESS
INNOVATION
RESEARCH

Collimators for X-Ray, Gamma Ray, and Neutron Astronomy

Artep, Inc.
Columbia, MD

INNOVATION

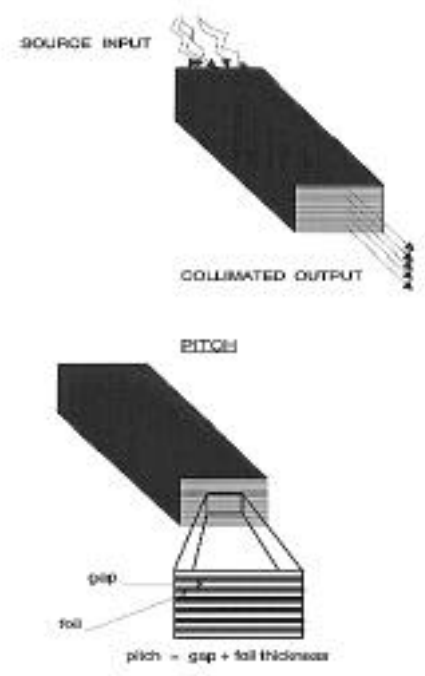
Manufacture fine collimators meeting the requirements for space based Fourier Transform Telescopes

ACCOMPLISHMENTS

- Assorted collimators and pin-holes ranging in pitch from 400 microns to 6 microns.
- Collimators have been built from tungsten, stainless steel, and ceramics
- Artep has built and delivered to the Goddard Space Flight Center full size collimator pairs (89mm x 89mm and 71mm x 71mm) with pitches of 150 microns and 49 microns

COMMERCIALIZATION

- Artep has sold collimators to the National Institute of Science and Technology (NIST), Argonne National Laboratory, and the Naval Research Laboratory
- Company has introduced its collimators at trade shows and has seven pending proposals with commercial clients
- Potential medical uses include high resolution cameras for imaging the brain and other organs



COLLIMATOR DEFINITIONS

GOVERNMENT/SCIENCE APPLICATIONS

- Used in obtaining fine collimation of X-rays, gamma rays and neutron beams in laboratories.
- In space and industry where imaging X-rays and neutron sources from a distance are required, they will be used in Fourier Transform Telescopes

Points of Contact:
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Goddard Space Flight Center

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